

Work Order ID 81858

81858

Page 1

March-19-12 4:27:05 PM

Item ID: D350-636-018

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Skidtube w/ Training Wearplates. RH

Start Date: 19/03/2012 Start Qty: 1.00

1

Cust Item ID:

Required Date: 02/04/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: *MLJ*

Date: *12/03/20* Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
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D4168	A
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IIN-D350-636	I
--------------	---

100

0.00

100

DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy blue file and type labels per PPP D350-636-018 CHG 002

*or chg 3 per ECN 12-542
(depends on D4154-C41)
Rev Bor (C)*

5/2/2012 HJ for MLJ 12-6-25

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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NOTE: Date & initial all entries

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Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

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Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

110

0.00

110

Skidtubes

Skidtubes

Memo

0.00

Skidtubes

1- Pick D2600-3 Bent

2- Deburr FWD and AFT ends, remove bending marks. Scribe batch# inside
AFT end per dwg D2750 *4168*3- Drill pilot holes for blade fitting bolt holes using DT8983. Open to 0.500",
deburr.4- Locate DT8329 off of blade fitting bolt holes and drill pilot holes for blade
fitting

5- Drill fwd step holes using DT9616 detail AA . Ensure proper positioning.

6- Drill pilot holes using drill Jig DT8150 & DT8864A for first side only
DT8864B for second side section BE-BE and BC-BC7- Clecko DT8864B on second side of tube and drill pilot holes for section BE-
BE and BC-BC ***SECOND SIDE***8-Drill pilot holes for wearplates as per Dwg D4168 using DT9678. Locating
from 66.54" holes.9-Open up holes of Detail A to 0.297" (total of 2 holes per side) +.201" holes
Detail AA.10-Weld D2744 Cap as per Dwg D4168 and QSI 004. Fill grooves in bend left
from bending as per QSI 004A/R Aluminum Rod batch: *m120 854**1 0 BE 4/05/31*

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Run

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NR1

QC:

Date:

SPC (Y/N):

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NR2Sequence ID/
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QtyReject
NumberInsp.
Stamp

11-Grind welds flush as per Dwg D4168

BE 12/05/31

120

QC10- Inspect visual per QSI004- ground welds

0.00

120

QC

Memo

0.00

Quality Control

130

QC5- Inspect part completeness to step on W/O

0.00

130

QC

Memo

0.00

Quality Control

S 12/05/31

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Run Hours

Tool ID

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Plan
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QtyReject
QtyReject
NumberInsp.
Stamp

140

Chemical Conversion Coat per QSI005 4.1

0.00

140

HandFinish

Memo

0.00

Hand Finishing

1 7/6 26.4

150

QC3 Inspect Part Finish

0.00

150

QC

Memo

0.00

Quality Control

① SAD 12-06-04

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
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Stop ***NR2***

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--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

160

0.00

160

Skidtubes

Skidtubes

Memo

0.00

Skidtubes

1-Open up holes of Detail AB and ground handling to 0.625" (total of 8 holes per side)
as per dwg D4168.

2-Open up holes of wearplate holes to 0.375" section CK-CK (total of 4 holes per side) 0.3125" holes section BC-BC (4 per side) as per dwg D4168.

3- Open float hole to 0.500" (4 per side)

4-Chamfer holes dwg D4168 (welding instructions on sheet 11)

5-Deburr and blow out all chips from inside of tube

6- Prepare tube for welding, remove alodine as required.

7-Bond web D2739 in place as per QSI 015

A/R Sikaflex-291 batch: m121409
exp. date: 13-4-12

8- Weld spacers as per dwg D4168 & QSI004
(welding instructions on sheet 11)

A/R Aluminum Rod batch: m120164 / m103953

9- Grind welds flush as per Dwg D4168

10-Spot face ground handling holes section (total of 4 places per side) as per dwg D4168

CF 12-6-4

BE 12/06/13

BE 12/06/14

W/O:		WORK ORDER CHANGES					
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Stamp

11- C'bore section CK-CK

12- Deburr holes

***** FOR DELUXE SKIDTUBE IF APPLICABLE DRILL TOW RING
HOLE IN TUBE *****

No

170

QC10- Inspect visual per QS1004- ground welds

0.00

170

QC

Memo

0.00

Quality Control

180

QC5- Inspect part completeness to step on W/O

0.00

180

QC

Memo

0.00

Quality Control

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Date:

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190	Pressure Wash per QSI005 4.3	0.00							
190									
HandFinish	Memo	0.00							
Hand Finishing	Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch.								
200	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum	0.00							
200									
Powdercoat	Memo	0.00							
Powder Coating	START TIME: 10:20 OVEN TEMPERATURE: 320°F FINISH TIME: 10:50								
210	QC3- Inspect Part Finish	0.00							
210									
QC	Memo	0.00							
Quality Control	Inspect for foreign object per QSI 024								

1 2/6 12/6/18

1X 12/06/18

12/11/12

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Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

220

0.00

220

HandFinishing

HandFinish

Memo

0.00

Hand Finishing

1- Install inserts as per Dwg D2750

1 RH 2 (2P) 12/06/20

230

0.00

230

HandFinishing

HandFinish

Memo

0.00

Hand Finishing

1-Inspect for Foreign Objects

2-Spray inside of tube with "LPS-3" batch: N/A

3-Install blade fitting D3488-041, wearshoes and ground handling hardware as per dwg D2750

SIKA FLEX 241

BATCH: 121-409

EXP DATE: 13/03

4-assemble o-ring to plug as per dwg D3492 and apply o-ring lube

A/R 55-o-ring lube batch: 114596 110348

5-Coat all exposed fasteners with "LPS Procyon" batch: 110348 114596

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Approvals: Process Plan: Date: Tooling: Date:

Run Start ***NR1***

QC: Date: SPC (Y/N): Date:

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

240 QC5- Inspect part completeness to step on W/O 0.00

240

QC Memo 0.00

Quality Control

12/4 PD 12-06-22

250 Pick Kit 0.00

250

Packaging Memo 0.00

Packaging

12/4 28 06/28

260 QC4- 100% Inspect kits for completeness 0.00

260

QC Memo 0.00

Quality Control

*****ensure antiseize is on AN8C21A bolts*****

S710010

PD

W/O:		WORK ORDER CHANGES					
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NR1

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Stop

NR2

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Work Center ID

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Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

270

270

Packaging

Packaging

0.00

Memo

0.00

Packaging

Identify and pack for shipping as per PPPD350-636-018

Location:

PPP rev: B

/X

SP
12-6-He

280

280

QC

Quality Control

QC21- Final Inspection - Work Order Release

0.00

Memo

0.00

12/6/27

ME

12-06-26

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
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Picklist Print

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Parent Item Name: Skidtube w/ Training Wearplates, RH

Start Date: 19/03/2012

Required Date: 02/04/2012

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP rev:A 10.09.28 new issue DD verf:EC
11.04.14 ecn11-553 DD verf:EC
NCR 11-906 DD verf:EC

IPP Rev:B
IPP Rev:C 11.10.18 as per

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D3490-1		Manufactured	No			160	Each	37.0000	4	4			
---------	--	--------------	----	--	--	-----	------	---------	---	---	--	--	--

D3490-1

Cross Bolt Spacer

Location	Loc Qty	Loc Code
LG001	37	
62450	2	
74875	4	
77042	3	
78793	28	

BE 12/06/11
B 83269 x4

AN3C34A		Purchased	No			230	Each	50.0000	1	1			
---------	--	-----------	----	--	--	-----	------	---------	---	---	--	--	--

AN3C34A

BOLT

Location	Loc Qty	Loc Code
ST353	50	
116075 ✓	30	
117514	20	

1 (2P) 12/06/22

W/O:		WORK ORDER CHANGES					
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Start Date: 19/03/2012

Required Date: 02/04/2012

Start Qty: 1.00

Required Qty: 1.00

AN3C36A

Purchased

No

230

Each

154.0000

4

4

AN3C36A

BOLT

**

4 (2P) 12/06/22

Location

Loc Qty

Loc Code

FG

4

101261

4

ST353

150

116590

0

119083

2

119324

53

120641

40

121013

55

AN3C37A

Purchased

No

230

Each

207.0000

1

1

AN3C37A

BOLT

**

Handwritten signature

Location

Loc Qty

Loc Code

ST354

207

116874

11

117010

2

120422

44

120731

50

121068

100

AN3C42A

Purchased

No

230

Each

40.0000

1

1

AN3C42A

BOLT

**

12/2/06

12/2/103

Handwritten signature

Location

Loc Qty

Loc Code

ST354

40

106176

1

119673

14

120464

25

W/O:		WORK ORDER CHANGES					
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Start Date: 19/03/2012

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Start Qty: 1.00

Required Qty: 1.00

D3488-042

Manufactured No

230

Each

19.0000

1

1

D3488-042

Blade Fitting Assembly, RH

**

2P

12/06/22

Location

Loc Qty

Loc Code

FP002

83417

19

62003

1

75068

9

77015

9

D3490-5

Manufactured No

230

Each

45.0000

4

4

D3490-5

Cross Bolt Spacer

**

8E 12/06/11

B 83373 *1

Location

Loc Qty

Loc Code

LG

25

78958

25

LG001

20

59230

20

D3492-1

Manufactured No

230

Each

122.0000

8

8

D3492-1

Plug

**

8

2P

12/06/20

Location

Loc Qty

Loc Code

FP002

83259

122

69531

8

74444

2

76235

12

77037

100

D3492-5

Manufactured No

230

Each

32.0000

8

8

D3492-5

Plug

**

8

2P

12/06/20

Location

Loc Qty

Loc Code

FP002

83100

32

77044

32

March-19-12 4:27:10 PM

Shop Packet Print

Page 3

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Work Order ID: 81858

81858

Parent Item: D350-636-018

D350-636-018

Parent Item Name: Skidtube w/ Training Wearplates, RH

Start Date: 19/03/2012

Required Date: 02/04/2012

Start Qty: 1.00

Required Qty: 1.00

D3873-1

Manufactured No

230 Each

151.0000 7 7

D3873-1

Bushing

**

7

2P

12/06/22

Location

Loc Qty

Loc Code

ST057

76791

105

79561

105

ST067

46

64760

1

68247

4

73829

19

73830

2

79560

20

D4154-041

Manufactured No

230 Each

1.0000 1 1

D4154-041

Wearplate Assembly

**

1

2P

12/06/22

Location

Loc Qty

Loc Code

FG

83219

1

77007

1

D4170-1

Manufactured No

230 Each

9.0000 4 4

D4170-1

Bushing

**

4

4

BE 12/06/11

B 82043 24

Location

Loc Qty

Loc Code

LG001

9

71844

5

76677

4

D4171-1

Manufactured No

230 Each

7.0000 1 1

D4171-1

Bushing

**

1

2P

12/06/22

Location

Loc Qty

Loc Code

ST135

77008

7

77008

7

82385

1

2P

12/06/22

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

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Work Order ID: 81858

81858

Parent Item: D350-636-018

D350-636-018

Parent Item Name: Skidtube w/ Training Wearplates, RH

Start Date: 19/03/2012

Required Date: 02/04/2012

Start Qty: 1.00

Required Qty: 1.00

MS21043-3

Purchased

No

230

Each

793.0000

5

5

MS21043-3 ✓

Nut

**

5

DP

12/06/22

Location

Loc Qty

Loc Code

FG

72

103691

72

GA

304

120693

304

ST301

417

118077

2

118614 ✓

365

118686

30

119758

20

NAS1149C0363R

Purchased

No

230

Each

3,373.000

9

9

NAS1149C0363R ✓

Washer

**

9

DP

12/06/22

Location

Loc Qty

Loc Code

ST297

3373

114742 ✓

3373

NAS1515H3L

Purchased

No

230

Each

180.0000

4

4

NAS1515H3I ✓

WASHER

**

4

DP

12/06/22

Location

Loc Qty

Loc Code

FG

40

102472

40

ST277

140

118686

3

119438

1

120072

36

120360

100

121556 ✓

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Work Order ID: 81858

81858

Parent Item: D350-636-018

D350-636-018

Parent Item Name: Skidtube w/ Training Wearplates, RH

Start Date: 19/03/2012

Required Date: 02/04/2012

Start Qty: 1.00

Required Qty: 1.00

NAS1611-005

Purchased

No

230

Each

204.0000

8

8

NAS1611-005

O-RING

**

9

DP

12/06/20

Location

Loc Qty

Loc Code

FP001

204

106099

31

114220 ✓

105

119438

68

NAS1611-010

Purchased

No

230

Each

201.0000

8

8

NAS1611-010

O-RING

**

9

DP

12/06/20

Location

Loc Qty

Loc Code

FP

50

110915

0

120770

50

FP001

151

110915

14

117460

8

118077

1

118612

3

119438

47

120308

28

120986

50

NAS1149D0863J

Purchased

No

250

Each

227.0000

2

2

NAS1149D0863.I

WASHER

**

120308

12/4/25

DP

Location

Loc Qty

Loc Code

ST298

227

118078

36

119307

91

120308

100

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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NOTE: Date & initial all entries

Picklist Print

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Work Order ID: 81858

81858

Parent Item: D350-636-018

D350-636-018

Parent Item Name: Skidtube w/ Training Wearplates, RH

Start Date: 19/03/2012

Required Date: 02/04/2012

Start Qty: 1.00

Required Qty: 1.00

D2744 Manufactured No

110 Each 57.0000 1 1

D2744

Cap

BE 12/05/31
*B 83412 *1*

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
LG002	57	
62715	1	
70881	9	
71861	5	
78900	42	

D2600-3-BENT Manufactured No

110 Each 22.0000 1 1

D2600-3-BENT

Extrusion Bent

BE 12/05/31
*B 83442 *1*

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
LG	22	
66875	7	
73253	1	
75021	1	
75022	1	
75023	1	
81330	11	

D2743 Manufactured No

160 Each 224.0000 8 8

D2743

Crossbolt Spacer

BE 12/06/11
*B 83262 *8*

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
LG001	224	
67766	4	
68251	3	
73403	64	
74445	1	
78603	52	
79517	100	

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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NOTE: Date & initial all entries

Picklist Print

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Work Order ID: 81858

Parent Item: D350-636-018

Parent Item Name: Skidtube w/ Training Wearplates, RH

81858

D350-636-018

Start Date: 19/03/2012

Required Date: 02/04/2012

Start Qty: 1.00

Required Qty: 1.00

D2739 Manufactured No

160 Each

7.0000

1

1

D2739

350 I Beam

**

1 CF 12-6-4

Location

Loc Qty

Loc Code

LG

7

72155

1

80083

6

ALS4-1032-225

Purchased No

230 Each

1,056.000

4

4

AI S4-1032-225

Insert

**

4 (DP) 12/06/20

Location

Loc Qty

Loc Code

ST281

1019

108696

146

110768

62

118386

55

118966

68

120671

688

ST282

37

120410

24

120451

13

AN8C35A

Purchased No

230 Each

64.0000

1

1

AN8C35A

BOLT

**

1 (DP) 12/06/22

Location

Loc Qty

Loc Code

FP002

63

115960

1

117834

10

118286 ✓

52

ST346

1

114442

0

115188

0

115960

1

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

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Picklist Print

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Work Order ID: 81858

81858

Parent Item: D350-636-018

D350-636-018

Parent Item Name: Skidtube w/ Training Wearplates, RH

Start Date: 19/03/2012

Required Date: 02/04/2012

Start Qty: 1.00

Required Qty: 1.00

AN6C44A

Purchased

No

230

Each

103.0000

4

4

AN6C44A

BOLT

**

4

(2P) 12/06/20

Location

Loc Qty

Loc Code

FG

121440 ✓
103964

2

2

ST343

101

120095

8

120143

25

120465

27

120641

21

121013

20

MS21083C8

Purchased

No

230

Each

80.0000

1

1

MS21083C8 ✓

NUT

**

1

(2P) 12/06/22

Location

Loc Qty

Loc Code

FP002

121185 ✓
115884

1

1

ST303

13

115884

0

118077

1

119309

2

119436

8

119638

2

ST304

66

120142

16

120731

25

121011

25

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

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Page 10

Work Order ID: 81858

81858

Parent Item: D350-636-018

D350-636-018

Parent Item Name: Skidtube w/ Training Wearplates, RH

Start Date: 19/03/2012

Required Date: 02/04/2012

Start Qty: 1.00

Required Qty: 1.00

D3631-1 Manufactured No

230 Each

207.0000 8 8

D3631-1

Washer

**

12/06/20

Location

Loc Qty

Loc Code

ST072

207

68062

2

75548

205

AN960C10L * AN960C10I * Purchased

No

230 Each

0.0000 4 4

*AN960C10I *

washer

D2745

Manufactured No

230 Each

128.0000 8 8

D2745

Bushing

**

12/06/20

Location

Loc Qty

Loc Code

FP

100

79518

100

FP001

28

69529

1

76142

1

78597

26

NAS1149C0832R Purchased

No

230 Each

303.0000 1 1

NAS1149C0832R

WASHER

**

12/06/22

Location

Loc Qty

Loc Code

ST297

303

114915

303

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

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Page 11

Work Order ID: 81858

Parent Item: D350-636-018

Parent Item Name: Skidtube w/ Training Wearplates, RH

81858

D350-636-018

Start Date: 19/03/2012

Required Date: 02/04/2012

Start Qty: 1.00

Required Qty: 1.00

AN3C6A

Purchased

No

230

Each

579.0000

4

4

AN3C6A ✓
BOLT

**

4

SP

12/06/22

Location

Loc Qty

Loc Code

FP001

121682 ✓

1

111982

1

ST351

578

111982

2

116419

23

116549

2

116704

12

117619

10

117688

1

117872

5

118422

13

119449

21

120423

89

120693

400

MS21043-6

Purchased

No

230

Each

805.0000

4

4

MS21043-6
NUT

**

4

SP

12/06/20

Location

Loc Qty

Loc Code

FG

20

103693

20

ST301

785

112314

79

117887

6

118384 ✓

200

120308

500

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

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Page 12

Work Order ID: 81858

81858

Parent Item: D350-636-018

D350-636-018

Parent Item Name: Skidtube w/ Training Wearplates, RH

Start Date: 19/03/2012

Required Date: 02/04/2012

Start Qty: 1.00

Required Qty: 1.00

D3493-1

Manufactured No

250

Each

62.0000

2

2

D3493-1

Washer

**

82023 C 80

Location

Loc Qty

Loc Code

ST050

62

70697

2

77573

20

78835

40

MS21083C8

Purchased

No

250

Each

80.0000

2

2

MS21083C8

NUT

**

A121305 C 80
M121349 80

Location

Loc Qty

Loc Code

FP002

1

115884

1

ST303

13

115884

0

118077

1

119309

2

119436

8

119638

2

ST304

66

120142

16

120731

25

121011

25

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Picklist Print

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Page 13

Work Order ID: 81858

81858

Parent Item: D350-636-018

D350-636-018

Parent Item Name: Skidtube w/ Training Wearplates, RH

Start Date: 19/03/2012

Required Date: 02/04/2012

Start Qty: 1.00

Required Qty: 1.00

AN8C21A

Purchased

No

250

Each

67.0000

2

2

**

121270

[Handwritten signature]

AN8C21A

BOLT

Location

Loc Qty

Loc Code

ST343

67

118758

5

120094

38

120872

4

121067

20

D2741

Manufactured

No

250

Each

33.0000

1

1

**

79516

[Handwritten signature]

D2741

Blade, 350 Skidtube

Location

Loc Qty

Loc Code

ST

-10

ST466

43

71856

1

76984

32

[Handwritten signature]

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

QTY -041	QTY -042	QTY -043	QTY -044	PART NUMBER	DESCRIPTION
X				D4168-041	350 SKIDTUBE ASSEMBLY, LH
	X			D4168-042	350 SKIDTUBE ASSEMBLY, RH
		X		D4168-043	350 SKIDTUBE ASSEMBLY, LH
			X	D4168-044	350 SKIDTUBE ASSEMBLY, RH
1	1	1	1	D2739	WEB
8	8	8	8	D2743	SPACER
1	1	1	1	D2744	CAP
8	8	8	8	D2745	BUSHING
1				D3488-041	BLADE FITTING, LH
	1			D3488-042	BLADE FITTING, RH
4	4	4	4	D3490-1	SPACER
4	4			D3490-3	SPACER
		4		D3490-5	SPACER
8	8	8	8	D3492-041	PLUG ASSEMBLY
8	8			D3492-043	PLUG ASSEMBLY
		8	8	D3492-045	PLUG ASSEMBLY
8	8	8	8	D3631-1	WASHER
7	7	7	7	D3873-1	BUSHING
1	1	1	1	D4154-041	WEARPLATE ASSEMBLY
1				D4168-1	SKIDTUBE WELDMENT, LH
	1			D4168-2	SKIDTUBE WELDMENT, RH
		1		D4168-3	SKIDTUBE WELDMENT, LH
			1	D4168-4	SKIDTUBE WELDMENT, RH
4	4	4	4	D4170-1	SPACER
1	1	1	1	D4171-1	BUSHING
4	4	4	4	ALS4-1032-225	INSERT
4	4	4	4	AN3C6A	BOLT
1	1	1	1	AN3C34A	BOLT
4	4	4	4	AN3C36A	BOLT
4	4	4	4	AN6C44A	BOLT
1	1	1	1	AN8C35A	BOLT
9	9	9	9	AN960C10	WASHER (OR NAS1149CO363R)
4	4	4	4	AN960C10L	WASHER (OR NAS1149CO332R)
1	1	1	1	AN960C816L	WASHER (OR NAS1149CO832R)
5	5	5	5	MS21043-3	NUT
4	4	4	4	MS21043-6	NUT
1	1	1	1	MS21083C8	NUT
4	4	4	4	NAS1515H3L	WASHER

GENERAL NOTES:

- MATERIAL: MAKE D4168-1/-2/-3/-4 FROM D2600-3 EXTRUSION (INITIAL LENGTH = 120.0).
- FINISH:
CHEMICAL CONVERSION COAT PER DART QSI 005 4.1 PRIOR TO INSTALLING D2739 WEB.
POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT AS INDICATED TO 1.0 ABOVE SKIDTUBE CENTER-LINE PER DART 005 4.4 (OPTIONAL).
- TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- UNITS: INCHES UNLESS OTHERWISE NOTED
- BREAK SHARP EDGES: N/A
- IDENTIFICATION: N/A
- WEIGHT: D4168-041/-042/-043/-044 = 32.3 LBS
- WELD PER DART QSI 004
- FINAL CONFIGURATION SHOULD HAVE THE FOLLOWING MINIMUM MECHANICAL PROPERTIES:
MINIMUM YIELD TENSILE STRENGTH = 35 KSI
MINIMUM ULTIMATE TENSILE STRENGTH = 38 KSI
- COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF
POWDER COATING WITH MEK DEGREASER.
- SPACER AND PLUG INSTALLED SAME AS SECTION AJ-AJ EXCEPT HORIZONTAL
- SPACER AND PLUG INSTALLED SAME AS SECTION AP-AP EXCEPT HORIZONTAL

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER

NO. 81858 MCT
12/03/20

RELEASED
2010-09-15

A		NEW ISSUE		SC	10.08.09
REV.		DESCRIPTION	BY	DATE	
DESIGN	SC	DART AEROSPACE USA, INC.			
DRAWN	SC	PORT HADLOCK, WA			
CHECKED		DRAWING NO.	REV. A		
MFG. APPR.		D4168	SHEET 1 OF 11		
APPROVED		TITLE	SCALE		
DE APPR.		350 SKIDTUBE ASSEMBLY	NTS		
DATE	10.08.09	<small>COPYRIGHT © 2010 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PROPRIETARY AND CONFIDENTIAL, AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE REPRODUCED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>			

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

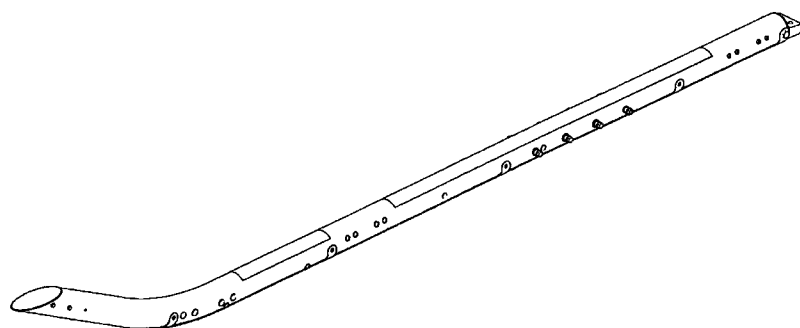
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

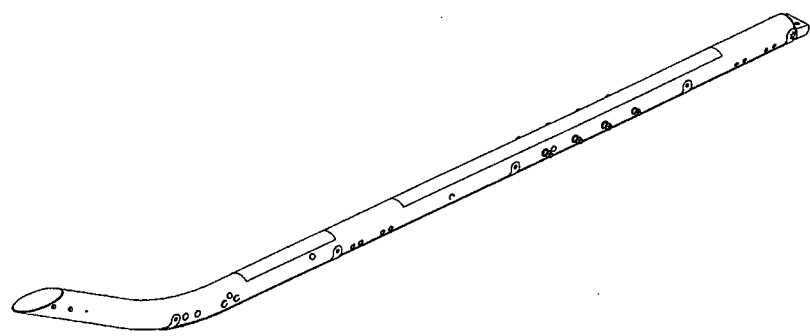
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

81258



D4168-041 350 SKIDTUBE ASSEMBLY, LH



D4168-042 350 SKIDTUBE ASSEMBLY, RH

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2010-09-15
JW

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DE APPR.	<i>[Signature]</i>	
DATE	10.08.09	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

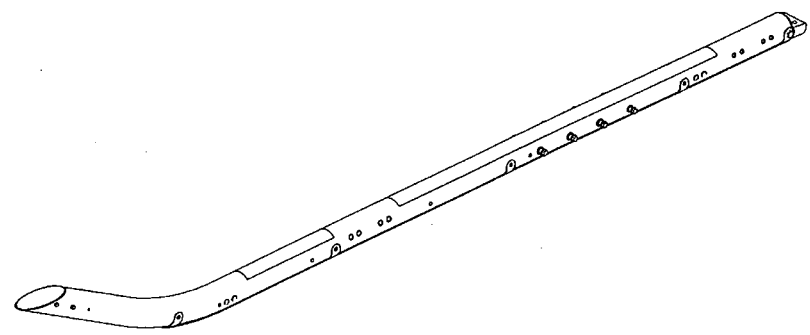
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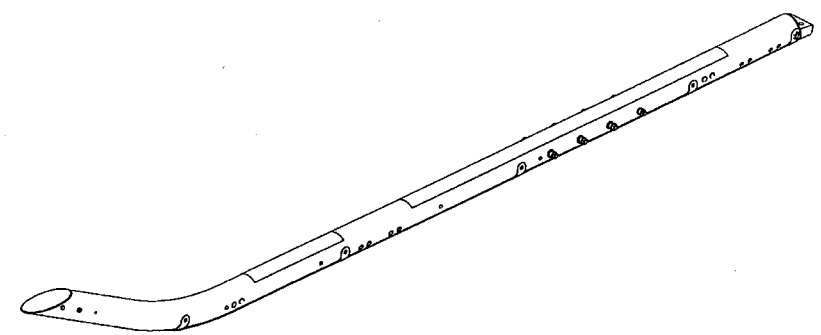
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

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D4168-043 350 SKIDTUBE ASSEMBLY, LH



D4168-044 350 SKIDTUBE ASSEMBLY, RH

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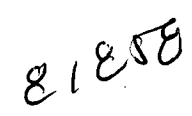
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Technical drawing of a tapered shaft. The drawing shows a shaft with a tapered section. Key dimensions include a length of 0.84, a total length of 2.770, a tapered section length of 2.77, an outer diameter of Ø 0.297 THRU 2 PL, and an inner diameter of Ø 0.201.

Technical drawing of a shaft with four holes. The shaft diameter is $\varnothing 0.750^{+0.010}_{-0.000}$. The distance between the first two holes is 1.770. The distance between the last two holes is 1.770. The distance between the first and last holes is 3.940. The text "THRU 4 PL" indicates the holes go through 4 plates. The drawing is labeled "FIG. 1".

Technical drawing of a circular part. The drawing shows a cross-section of a circle with a diameter of $\varnothing 0.500$ and a tolerance of $+0.010$ to -0.000 . A hole is shown passing through the center, labeled "THRU". The angle of the hole is 23.5° .

Technical drawing of a shaft with dimensions and keyways. The shaft has a diameter of $\varnothing 40$ and a length of 1.180. There are two keyways, each with a width of 3.150 and a depth of 1.180. The keyways are located at the ends of the shaft. The drawing is labeled A4-1.

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DRAWING NO. D4168	REV. A SHEET 4 OF 11
TITLE 350 SKIDTUBE ASSEMBLY	SCALE NTS

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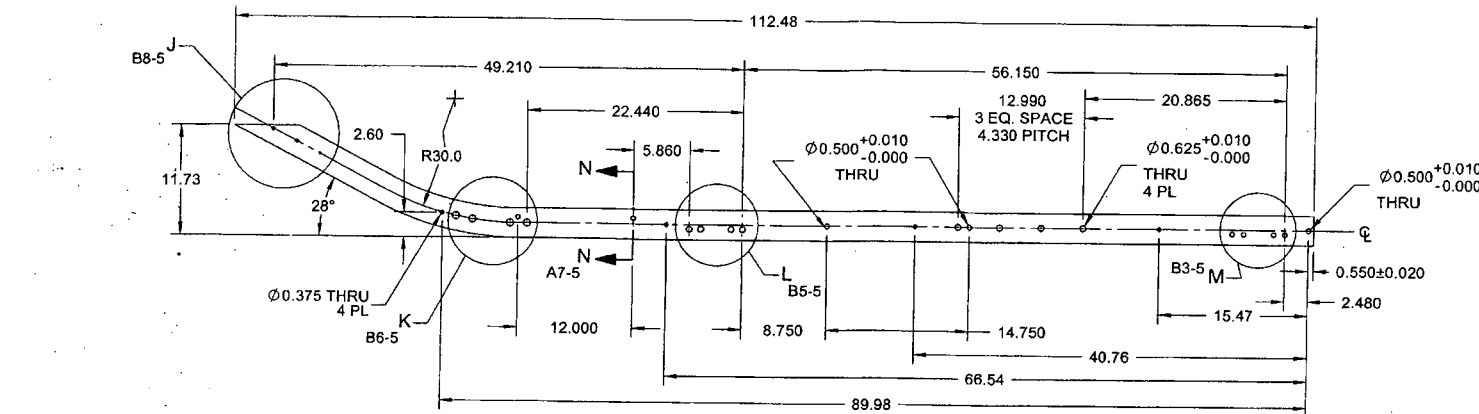
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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

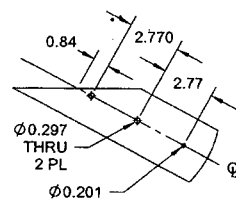
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

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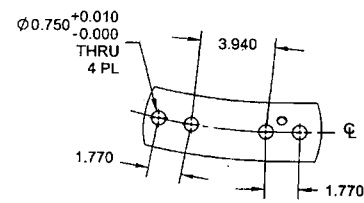
21258



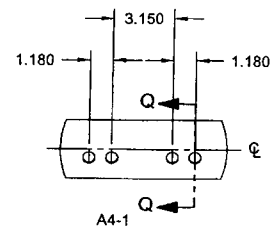
D4168-2 RH SKIDTUBE



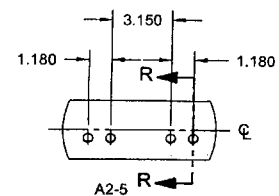
DETAIL J
SCALE 2X



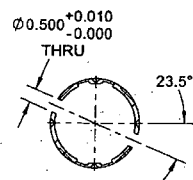
DETAIL K
SCALE 2X



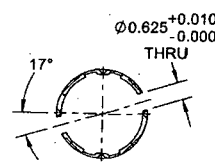
DETAIL L
SCALE 2X



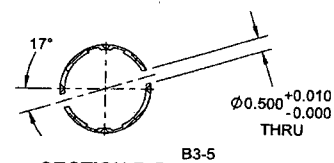
DETAIL M
SCALE 2X



SECTION N-N
SCALE 3X, 2 PL



SECTION Q-Q
SCALE 3X, 4 PL



SECTION R-R
SCALE 3X, 4 PL

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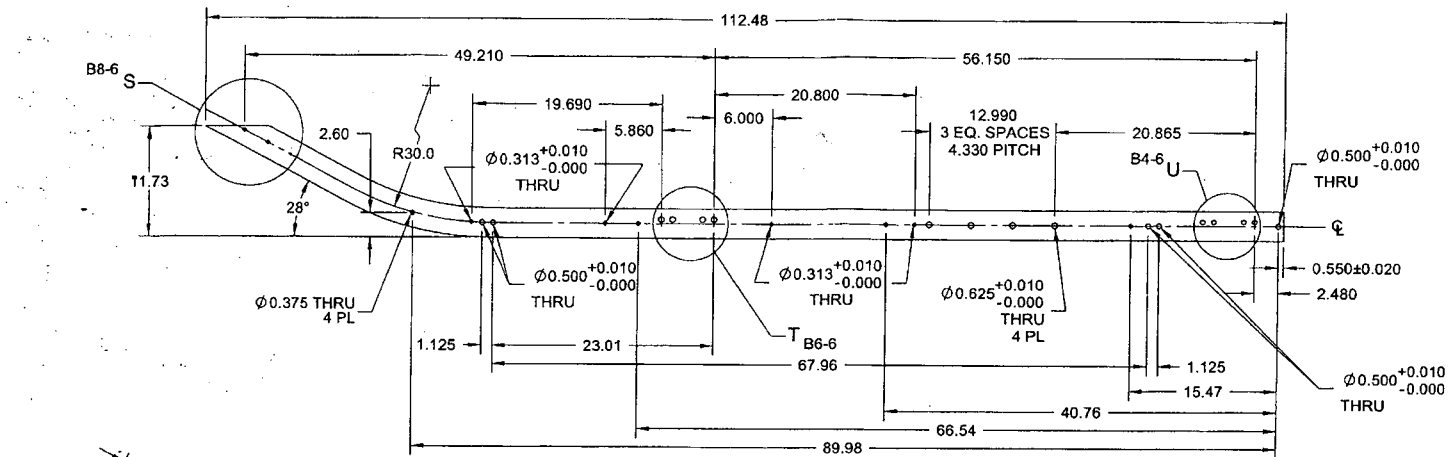
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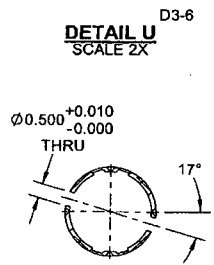
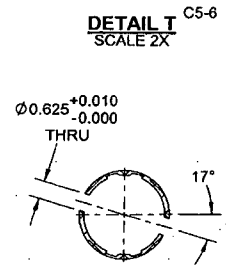
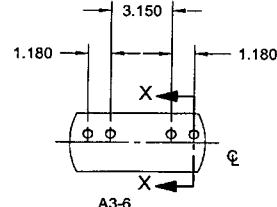
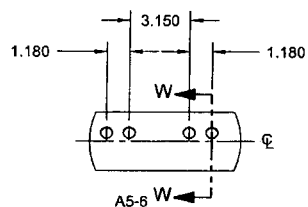
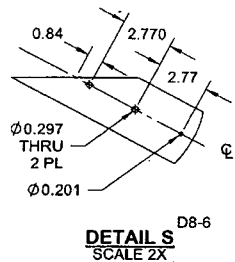
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D4168-3 LH SKIDTUBE



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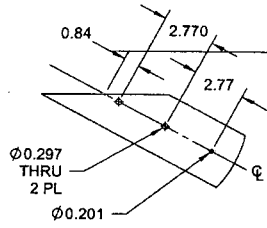
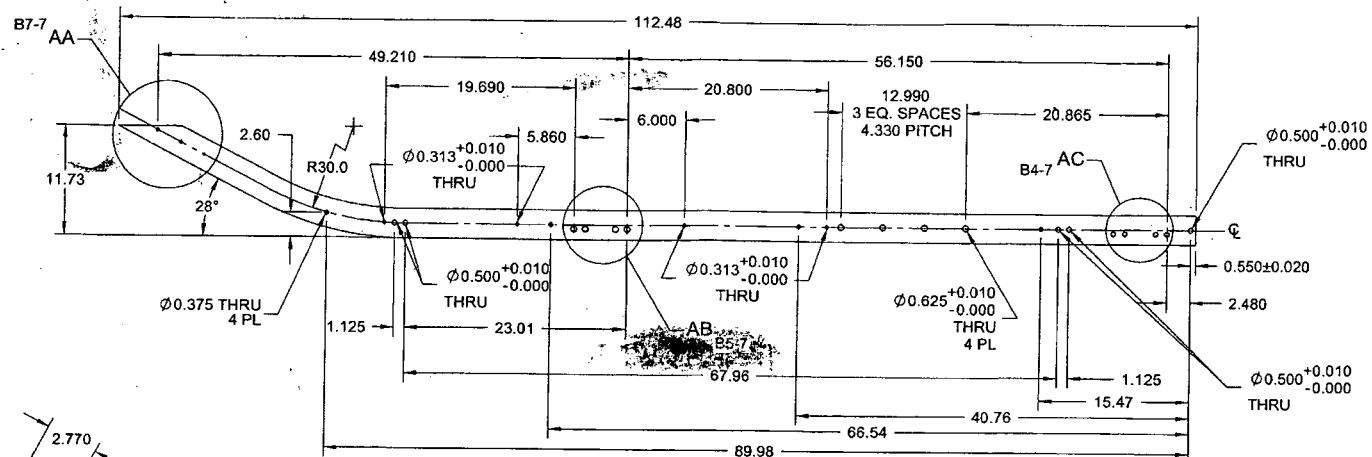
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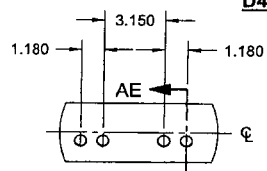
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

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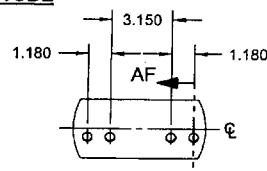
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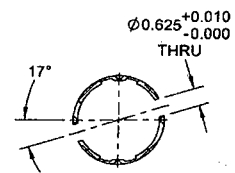
DETAIL AA
SCALE 2X



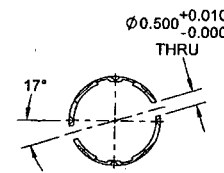
DETAIL AB
SCALE 2X



DETAIL AC
SCALE 2X



SECTION AE-AE
SCALE 3X, 4 PL



SECTION AF-AF
SCALE 3X, 4 PL

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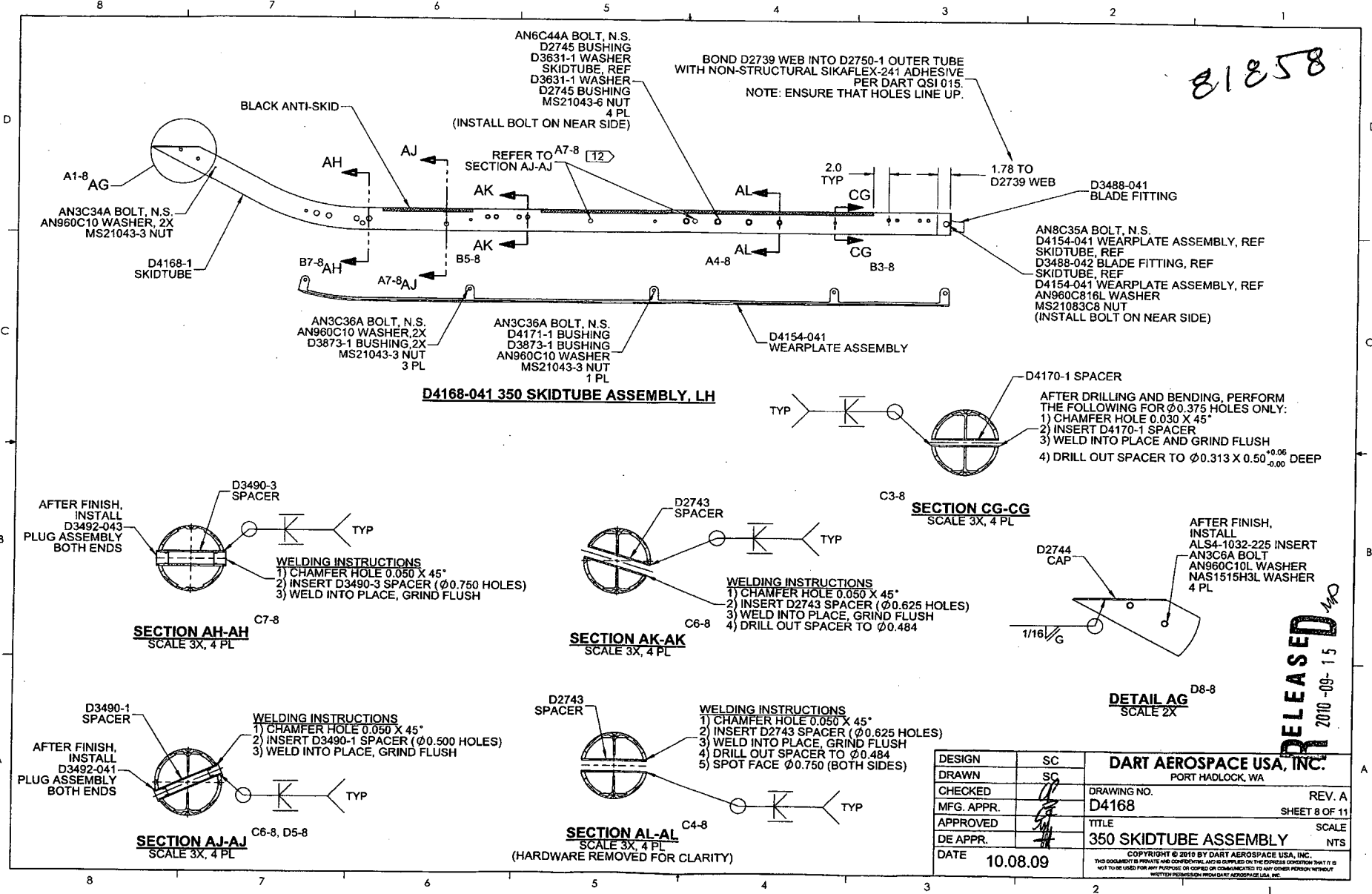
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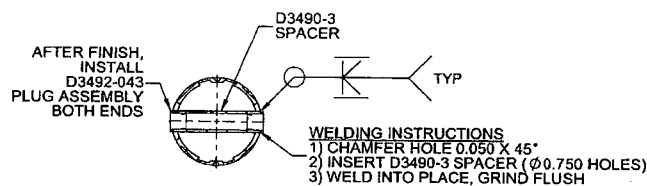
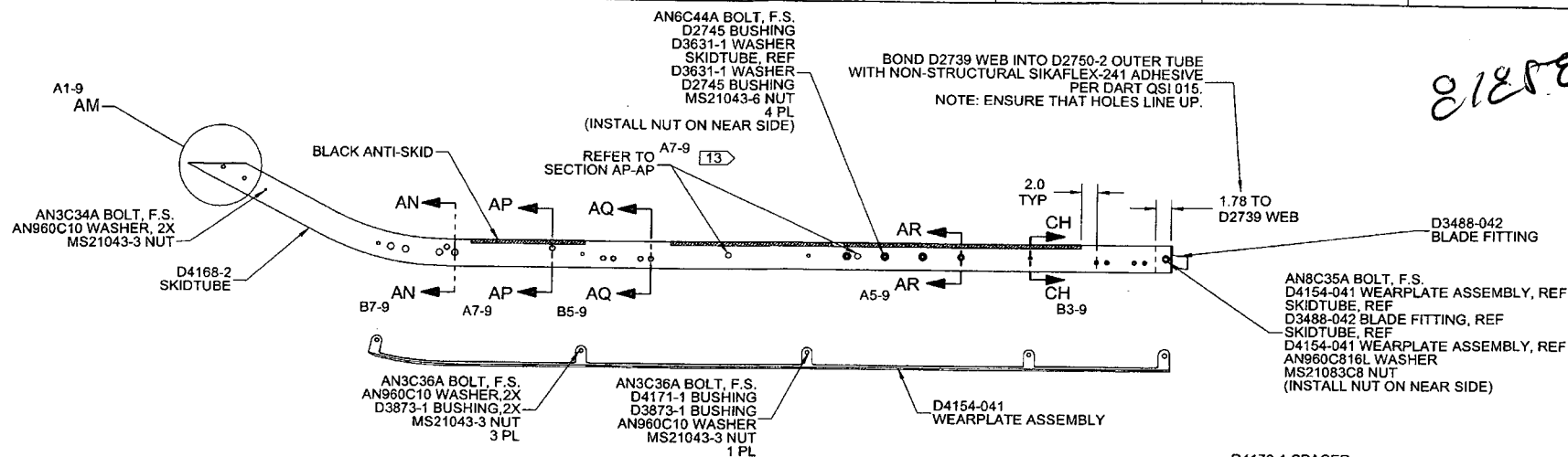
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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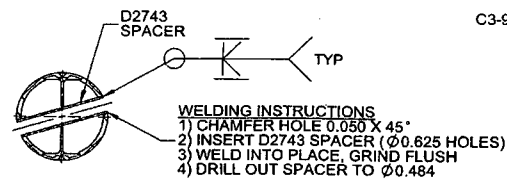
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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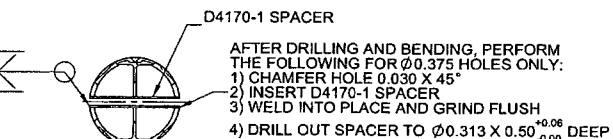
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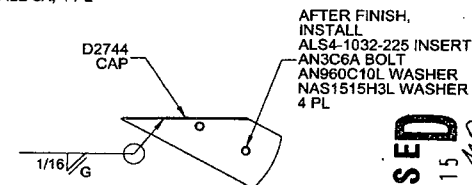
SECTION AN-AN
SCALE 3X, 4 PL



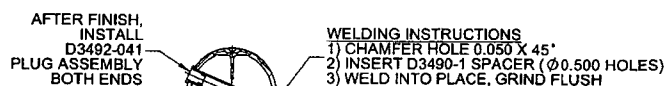
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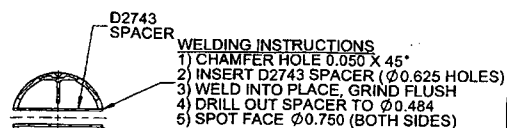
SECTION CH-CH
SCALE 3X, 4 PL



DETAIL AM
SCALE 2X



SECTION AP-AP
SCALE 3X, 4 PL



SECTION AR-AR
SCALE 3X, 4 PL
(HARDWARE REMOVED FOR CLARITY)

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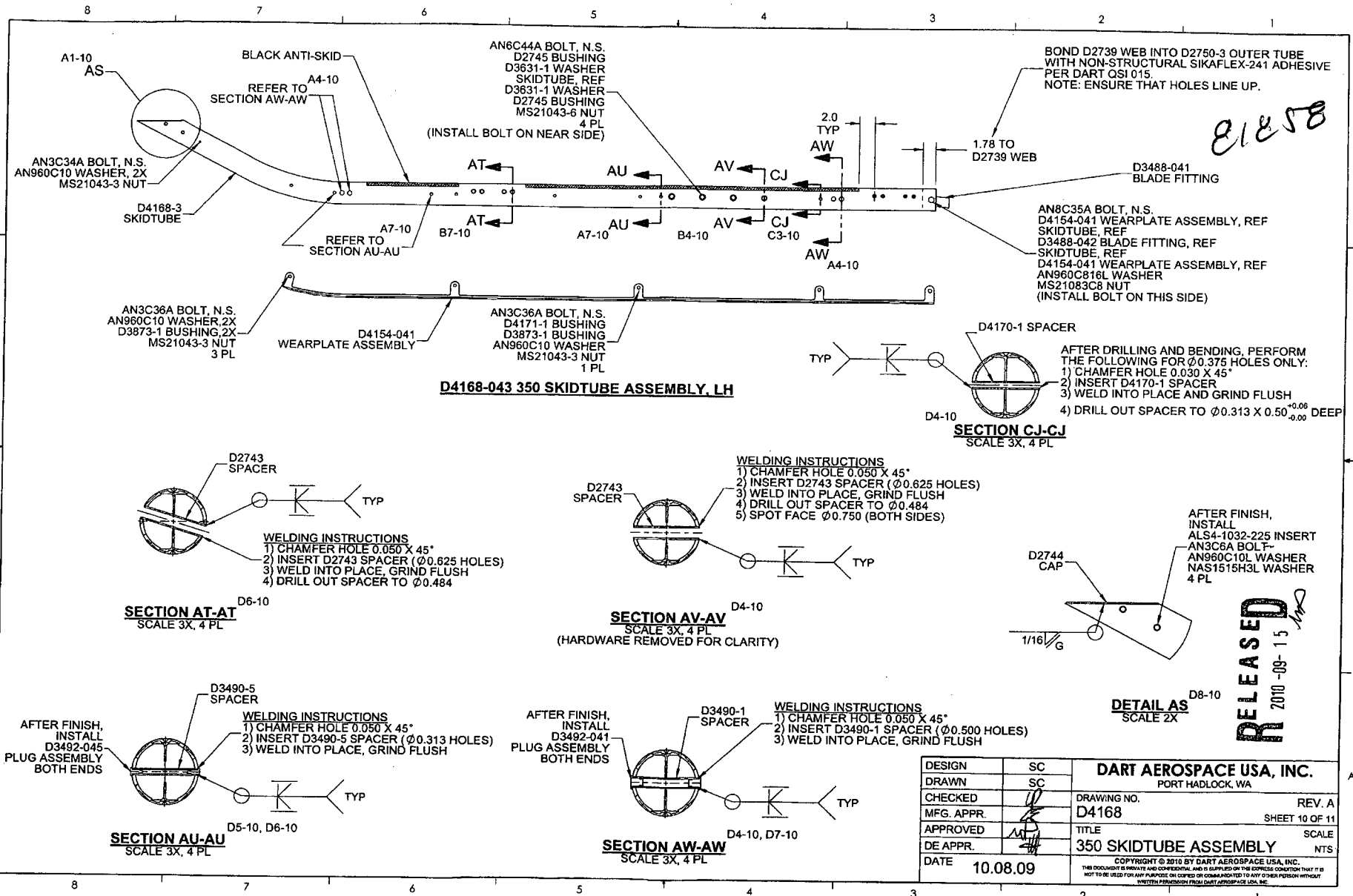
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

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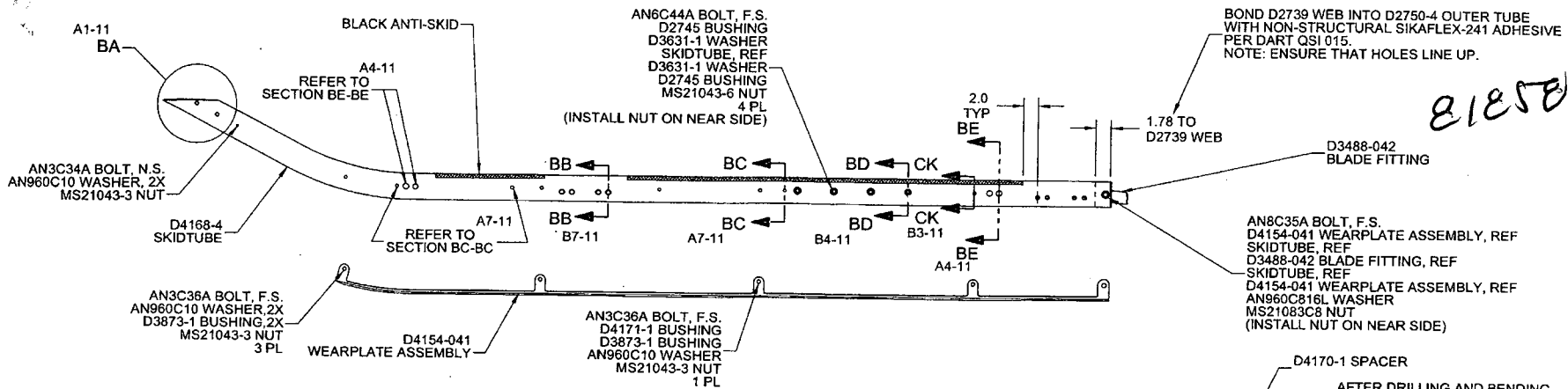
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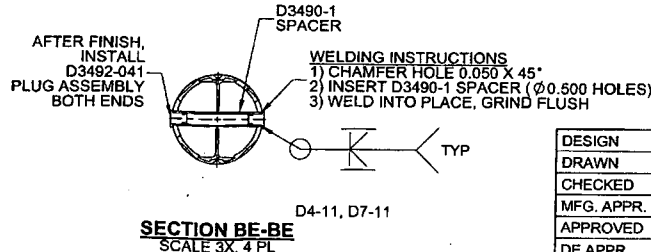
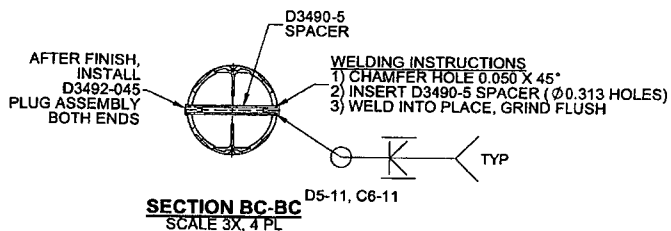
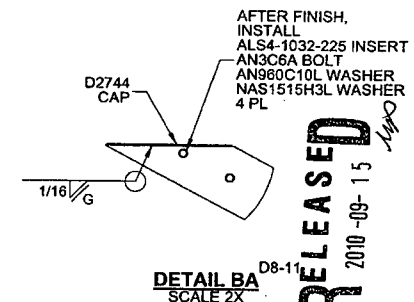
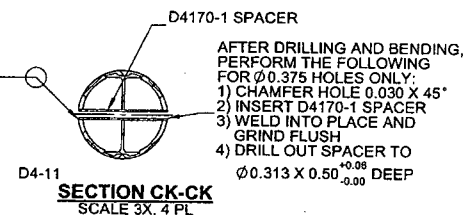
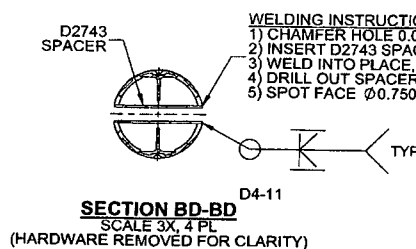
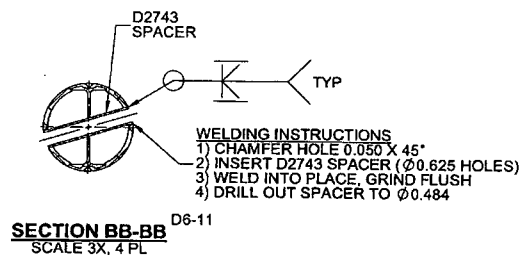
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D4168-044 350 SKIDTUBE ASSEMBLY, RH



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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

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NO. 294

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Barday Elliott
Job number: 83800
Part number: A350-636-012
Description: Skid tube
Welding Process: Tig[☒] Mig[☐]
Base material: Alum
Current: AC[☒] DC[☐]

TEST REQUIREMENTS AND RESULTS

Visual:

pass[☒] fail[☐]

Penetration:

pass[☒] fail[☐]

UNACCEPTABLE

Cracks:

pass[☒] fail[☐]

Undercut:

pass[☒] fail[☐]

Pin holes:

pass[☒] fail[☐]

Overlap (cold lap)

pass[☒] fail[☐]

Porosity (surface):

pass[☒] fail[☐]

Coloration:

pass[☒] fail[☐]

Qualifier David Arual

Date of Test Coupon 12.05.09

Welder Barday Elliott

Date of Test Coupon 12.05.09

The above named individual is qualified in accordance with AWS D17.1.2001 to weld